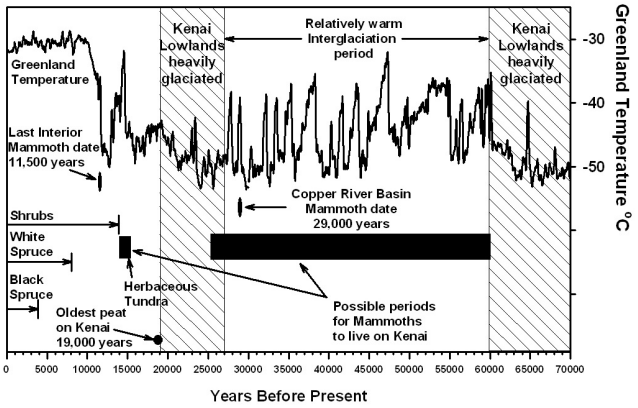
Did woolly mammoths roam the Kenai Peninsula? Part II

by Ted Bailey



Although no scientifically confirmed mammoth fossils have been found on the Kenai, there are two possible periods when the vegetation was suitable and the western Kenai lowlands were more-or-less ice free. During the most recent period (14 -15,500 years ago) an herbaceous tundra vegetation could have supported mammoths, but starting 14,000 years ago the vegetation became too shrubby for mammoths, who grazed mainly on grass and sedges. The temperature record was reconstructed from ice cores taken near the center of the Greenland icecap (R. Alley, C. Huber and others); Kenai temperatures were much warmer but probably followed the same general pattern. (Graphic by Ed Berg)

Although woolly mammoths lived in Interior Alaska before, during and shortly after the last major glaciation, it is uncertain if they could have traveled from the Interior to the Kenai Peninsula after the last lowland glaciers on the Peninsula retreated. However, woolly mammoths may have made it to the Kenai Peninsula during an earlier period between the maximum extents of the last two major glacial advances. There is documented evidence—the buried leg bone of a mammoth found in the Copper River basin—that the range of woolly mammoths extended further south than the Interior of Alaska about 29,000 years ago (see graphic). Possibly, they could have made it down to the Kenai Peninsula at this time.

What is the current evidence for mammoths on the Peninsula?

So far, the evidence is problematic, but intriguing, with many unanswered questions. Perhaps the earliest account (1943) of a proposed mammoth bone in the Cook Inlet basin was by University of New Mexico archeologist Frank C. Hibben. The proposed mammoth remains were associated with supposedly very early human artifacts on the south shore of Chinitna Bay on the west side of Cook Inlet. But a follow-up investigation in 1978 could find no geologic or archeological evidence validating the report, and samples dated by radiocarbon at the site was much too young (400 years) for mammoths. The investigators concluded that the 1943 report of mammoth remains and early human artifacts was invalid; the proposed mammoth bones were probably whale bones and the human artifacts were from a much later human occupation.

More recently—in 1976—a water-worn mammoth tusk was reportedly found on the beach at the base of Homer Spit but the present location of tusk is unknown. The geologic setting of the tusk, its age and how it arrived on the beach remain unknown.

Then, as Janet Klein reported in her recently updated book *Kachemak Communities: Their Histories, Their Mysteries*, between 1991 and 2007 a piece of a tusk, two molars and a toe bone of a mammoth were reportedly found by four people on the beaches between the mouth of the Anchor River and Homer Spit. However, none of these mammoth finds have been verified and their origin, geologic setting and age again remain unknown. Perhaps noteworthy is that extreme 100-year floods and severe erosion occurred on the southern Peninsula along the Anchor River and other southern Peninsula streams in October and November of 2002. Less erosive floods occurred along the Anchor River in mid-1980s and 1992. Could these floods have eroded mammoth remains from somewhere in the Anchor River, Fritz Creek or Deep Creek watersheds and carried the remains downstream into Cook Inlet to be later washed up on the nearby beaches?

We can speculate on various scenarios about the origin and presence of woolly mammoths on the Kenai Peninsula, but until woolly mammoth remains are found that can be verified, examined and dated, their origin and presence on the Peninsula will be ques-

tioned and will remain a mystery. One possible scenario proposed by geologist Dick Reger is that sometime between about 60,000 years ago to about 25,000 years ago when Kenai glaciers were restricted to the mountains, woolly mammoths dispersed out of Interior Alaska through an ice-free area into the Copper River basin and then southward to the Kenai Peninsula.

Of the mammoths that died, some could have buried in the Caribou Hills area, which remained ice-free—a refugium—during the last (Naptowne) glaciation. During that time the remains of other mammoths that may have died on the Kenai lowlands were either destroyed or deeply buried by the last glacial advance. But remains of mammoths that died in the ice-free refugium in the Caribou Hills could have been subsequently eroded from a stream bank, carried downstream into the Cook Inlet and deposited on the beach. Dick Reger recently calculated the ice-free region to be roughly 510 square miles, not a small area.

Another scenario is that mammoths somehow managed to disperse from the Interior to the Kenai about 13,000 years ago after the ice retreated from the Kenai lowlands and the young herbaceous tundra habitat became briefly favorable for mammoths.

To resolve these speculations, an ideal situation from a scientific viewpoint would be for someone to find, photograph, and leave the remains of a mammoth still embedded in the geologic layer in which they were deposited and to notify scientists who can verify that the remains are actually those of a mammoth. Scientists could then carefully excavate the remains, simultaneously collecting ecological information from the site and radiocarbon-dating the remains (bone, tusks or teeth).

Less ideal but still informative would be to have the persons now in possession of the mammoth remains from the Homer area come forward to allow scientists to extract a tiny sample of the bone, tooth or tusk for radiocarbon dating. That may at least give scientists an indication of whether the mammoth died a very long time ago between glaciations or after the last glaciation. I am confident that eventually the mystery associated with these reported finds of mammoth remains on the Kenai Peninsula will be solved and that our knowledge about the distribution and lives of woolly mammoths in Alaska will be further enhanced.

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Ted Bailey is a retired Kenai National Wildlife Refuge wildlife biologist who has lived on the Kenai Peninsula for over 32 years. He maintains a keen interest in the Kenai Peninsula's wildlife and natural history. Previous Refuge Previous Refuge Notebook columns can be viewed on the Web at http://www.fws.gov/refuge/kenai/.